

RAPID-POWDER-SWITCH



- ▷ Rapid-switching between powder ON and OFF
- ▷ Rapid-switching between 2 powder types
- ▷ transition-free powderswitching
- ▷ saves powder
- ▷ saves time
- ▷ reduced powder contamination
- ▷ reduced emission
- ▷ easy to maintain

Harald Dickler
Werkzeugmachermeister
F.W.-Raiffeisenstr. 31A
52531 Übach-Palenberg

Telefon +49 2451 6169989
Fax +49 2451 6169988
info@harald-dickler.de
www.HD-Sonderoptiken.de

Sparkasse Aachen
BLZ 390 50 000
Konto-Nr. 48 322 366
Swift AACSD 33
IBAN DE07 3905 0000
0048 3223 66

Steuer-Nr. 201/5082/4535
Ust-Id.Nr. DE 240649089



Powder savings with

- ▷ Collecting the powder until a constant powder mass flow is reached after switching ON
- ▷ No powder trickles after turning OFF
- ▷ **Increased powder efficiency**

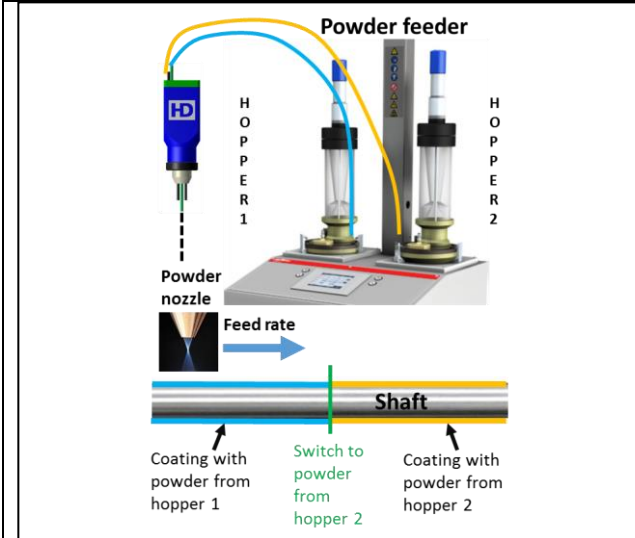


Powder-Pulse-Operation

- ▷ Rapid switching between powder ON and OFF
- ▷ Reproducible results
- ▷ Low powder consumption

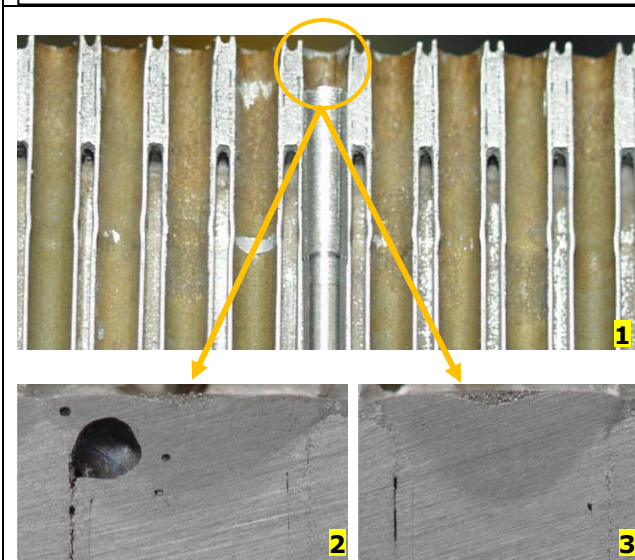
Picture left:

- ▷ Process speed: 300 mm/min
- ▷ ON-/OFF-Time: <200ms
- ▷ **Powder savings of up to 50%**



Non-Stop-Processing

- ▷ Transition-free switching between the two powder hoppers 1 and 2
- ▷ Continuous coating without process interruption
- ▷ Avoid of cracks and pores at the transition points
- ▷ 24 Hours / 365 Days per Year
- ▷ **Time saving of min. 10 minutes per process cycle**



Just-in-time

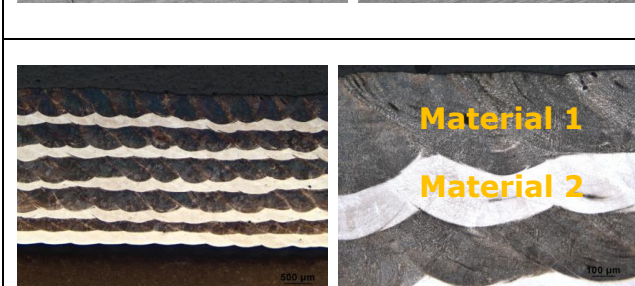
Picture 1: Initial state – Laser material deposition of a recess

Picture 2 (without Rapid-Powder-Switch):

- ▷ Laser material deposition
- ▷ Pores by remaining powder

Picture 3 (with Rapid-Powder-Switch):

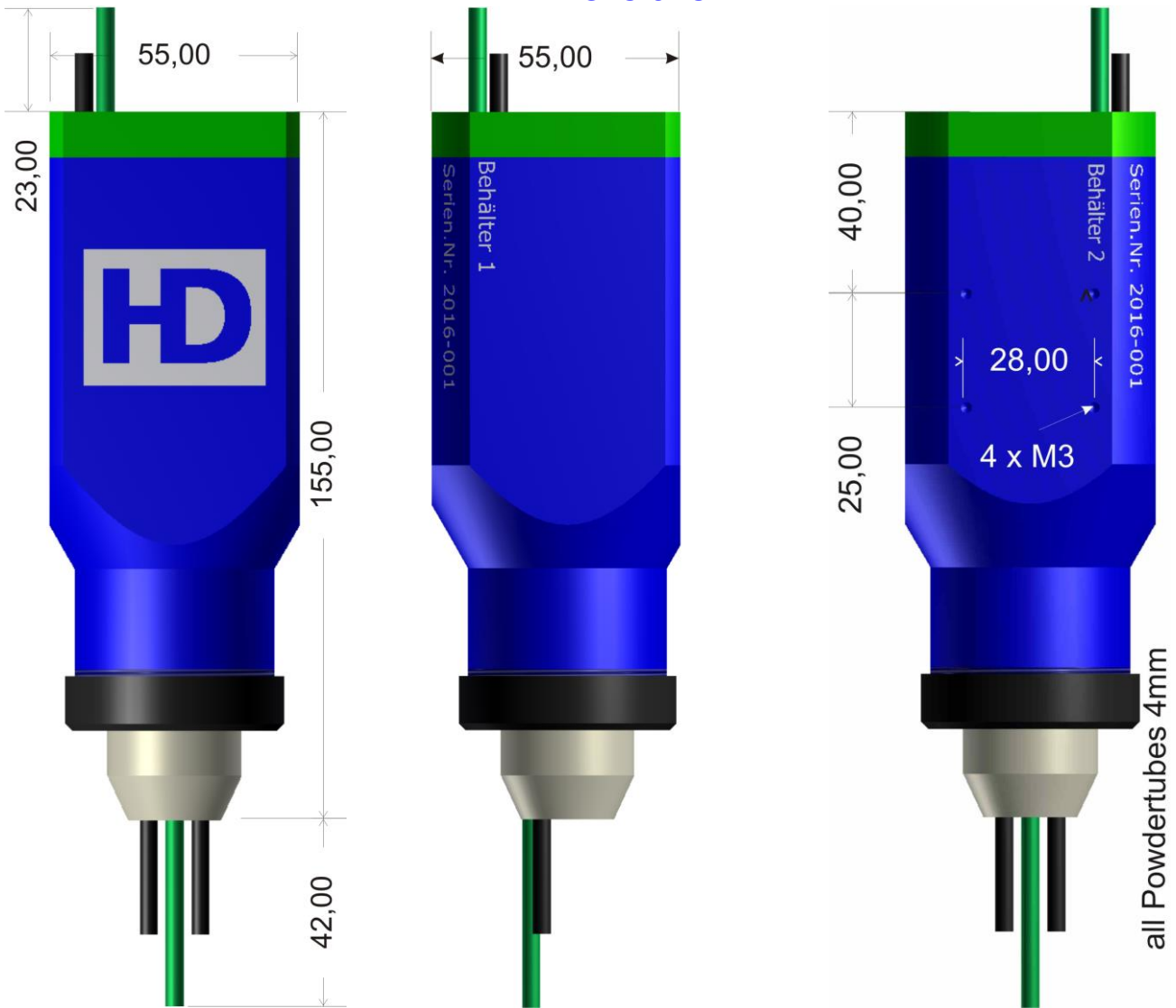
- ▷ Heat input without powder (Step 1)
- ▷ Fast automated and timed switching of powder (Step 2)
- ▷ No cracks / pores
- ▷ Suitable for materials susceptible to cracking and pores



Multifunctional layers

- ▷ Rapid switching between two powder types
- ▷ Multi layer coating with hard and soft material alternately
- ▷ Prevention of crack propagation

Dimensions



Powder changing

Example: Powderchanging Position 1



Example: Powderchanging Position 2



Powder flow

Example: Powderflow Position 1



Example: Powderflow Position 2



Delivery contents

Powderconveyor:
Example picture

